is disposed to regard the steppe-period as contemporaneous with the Ice-Age in Europe; but no traces of glaciation occur in Northern China. He reiterates his well-known views regarding the origin of the Loess, and cites a number of authors who have elsewhere been led to the same conclusion, that the deposit is essentially a subaërial one, formed by long-continued wind-drift with the help of vegetation. That this conclusion is true for the high arid regions of Asia and Western America cannot be doubted by any attentive observer who has watched what is now daily going on in either of these regions. In his first volume the Loess was spoken of as "subaërial"—a term altered in the present volume into "æolian," which the author noticed for the first time employed geologically in Mr. Clarence King's Report on the "Exploration of the Fortieth Parallel." It is a very good term, but of much older date than the Baron supposes, for he will find it in Captain Nelson's suggestive paper on the Bahamas, published as far back as 1852.

In a section "Upon Abrasion and Transgression," the author insists upon the paramount influence of the sea as an agent in planing down the surface of the land. "Regional abrasion," he affirms, "can only be accomplished by the advance of the breakers." This used to be also the opinion of geologists in Britain, who from their insular position and stormy climate had exceptional advantages in studying marine denudation. But there is now a wide-spread conviction among them that the part played by the sea in the levelling of land has been much exaggerated. For the production of a plain of erosion the co-operation of the sea is no doubt necessary. But the abrasion of the land down to the level of the sea is the work of the subaërial agents, and only the final touches are given by the breakers. A "plain of marine denudation" is the surface down to which a terrestrial area has been reduced. Its position and form were mainly determined by the lower limit of breaker action. But by far the greatest amount of abrasion was done by wind, rain, frost, rivers, glaciers, and other subaërial forces, which in fact reduce the land to the level at which breaker action could take effect. Oscillations of level might doubtless assist the sea, but any such help would be of comparatively trifling value.

In a final section the author gives a sketch of the coal-fields of Northern China, and analyses of sixty varieties of coal which will be found of some economic interest. He must be congratulated on the appearance of this second volume. The task he has undertaken is a most laborious one; but the method he follows is well suited to combine scrupulous attention to details and general intelligibility and interest. Without ample details his work would be of comparatively little value to those who shall hereafter travel over the same ground to verify, modify, or extend his observations. On the other hand, mere details would repel ordinary readers; but Baron von Richthofen skilfully caters for them in his large print summaries, where they find the points so well put before them as to induce probably not a few to attack the voluminous detail. It is to be hoped that the Baron may find leisure enough to enable him soon to complete the work.

ARCH. GEIKIE

OLD ENGLISH PLANT-NAMES

Sinonoma Bartholomei. A Glossary from a Fourteenth Century Manuscript in the Library of Pembroke College, Oxford. Edited by J. L. G. Mowat, M.A. (Oxford: Clarendon Press, 1882.)

IT is announced that "under the general title of 'Anecdota Oxoniensia,' it is proposed to publish materials, chiefly inedited, taken directly from MSS., those preserved in the Bodleian and other Oxford Libraries to have the first claim to publication." The materials will be issued in four series—(1) Classical, (2) Semitic, (3) Aryan, (4) Mediæval and Modern; and the work named at the head of this notice is the first of the fourth series.

Of the general value of these mediæval glossaries it is of course unnecessary to speak. The "Promptorium Parvulorum" (c. 1440), issued by the Camden Society in 1865, and the Early English Text Society's "Manipulus Vocabulorum" (1570) and "Catholicon Anglicum" (1483)—the latter one of the most recent as it is one of the most useful of their publications—may well be styled priceless records of the English language. Our only regret is that the whole work from which the "Sinonoma" is taken has not been made accessible, as Mr. Mowat's brief preface renders it abundantly evident that it contains much which would be useful, and probably also amusing—if we may judge from the few sample extracts which he gives, one of which refers to the "pulvis pro instrumento illo bellico sive diabolico quod vulgaliter dicitur *gunne*."

The editor tells us that "it was in the plant-names chiefly that [his] interest lay"; and this is easily accounted for when we see how large a proportion words of that class bear to the whole glossary. We have lately had from Prof. Earle an interesting little volume on "English Plant-Names from the Tenth to the Fifteenth Century"; while the "Dictionary of English Plant-Names" by Mr. Holland and myself, of which the third and last part is nearly ready for issue by the English Dialect Society, is, I hope, fairly complete for such names from the days of William Turner downwards. Some day it will, I trust, be found practicable to combine these two, adding to them the names found in "Promptorium Parvulorum" and in other early glossaries, both published and unpublished; and the "Sinonoma" will form a useful adjunct to such a work. There can be no doubt that Mr. Earle's book and the "Dictionary of English Plant-Names" will be found to supplement one another to an extent hardly suspected by Mr. Mowat, who, in spite of his interest in plant-names, does not seem to have consulted the latter work. For instance, he gives "Allium agreste, *i.* crawe-garlek," and adds in a footnote "probably meadow-saffron." A *meadow* plant would hardly be termed *agreste*; and a reference to the "Dictionary" would have identified the crowgarlic with *Allium vineale*, which is so called by Turner ("Names of Hebes"), and is, or was, sometimes—*fide* Lisle's "Husbandry" (1757)—as troublesome a weed among corn in England as it is in the continental vineyard from which it took its specific name. Later on (p. 38) we find Mr. Mowat saying of "Allium sylveste" [sylvestre] that it "can be no other than meadow saffron." Here again the designation

sylvestre should have put the editor on his guard; the reference to Fuchs which he gives shows clearly that some *Allium* was intended, and tracing the synonymy through Bauhin to Linnæus, we find that *A. vineale* is the species meant. Even apart from this evidence, it is obvious that the "sellers of simples" who substituted another herb for *Teucrium Scordium* would have selected one that had a similar smell, and not one like the *Colchicum*, which has no such odour. Mr. Mowat rightly identifies the "gosegresse" of the "Sinonoma" (p. 41) with *Potentilla Anserina;* but it is hardly accurate to say that it is "generally cleavers" (*Galium Aparine*). The "Dictionary of English Plant-Names" shows that the *Potentilla* is at least as frequently called goosegrass nowadays; and it is the "Gosgres" of the Old English Medical MS. printed in Archæologia, vol. xxx. (p. 408)—a glossary containing many plant-names which have been too little noticed. "Caputpurgium, *i.* stafisagria," is not *Pedicularis*, as glossed by Mr. Mowat—a plant supposed to favour the growth of lice—but the Staves-acre, which has been used for destroying them since the days of Pliny. Similarly "Calendula, *i.* solsequium," is not Caltha, but the Marigold, *Calendula officinalis;* this is made quite clear by the description under Kalendula, which may be cited as an example of the capital diagnoses which the glossary contains. "Kalendula est herba crescens in hortis portans florem rubeum vel croceum de quibus floribus faciunt sibi juvenculæ coronas, solsequium idem."

To make a glossary of this kind useful to other than English-speaking students, the plants should be identified with their Latin as well as by their English names. Even in America, the mention of the cowslip would suggest, not *Primula veris* but *Caltha palustris*. Mr. Mowat says (quite correctly) that "pigle, pagle, paigle seems to be the regular old name for cowslip"; and he seems to imply that the entry "pigle, *i.* stichewort," may also refer to *Primula veris*. But a previous entry, "Lingua avis, *i.* stichewort, *i.* pigle," is quite sufficient to confirm the natural conclusion that by stitchwort *Stellaria Holostea* (which is still commonly so called) was intended; and this plant is called pigle by Gerard in his appendix of "names gathered out of ancient written and printed copies, and from the mouthes of plaine and simple countrie people." Under "Serpillum" we find the name "pelestre," which Mr. Mowat queries "palustre?" but this is a form of Pellitory, already given on p. 34—"Piretrum, pelestre idem"—the name "Piretrum" showing that *Anacyclus Pyrethrum*, not *Parietaria*, was intended; the Anacyclus also figures in the Glossary under the name of "Dentaria," in allusion to its former use in toothache. An instance of the insufficiency of English names is given in the gloss of "Umbilicus veneris, *i.* penigresse," as "penny-grass, penny-wort"; it is of course *Cotyledon*, not *Hydrocotyle*, which is here meant, though the vernacular names are common to the two plants.

In most cases, however, where Mr. Mowat has given a modern synonym, it is correct; but I do not quite understand why only comparatively few plants are identified, as the identifications are by no means confined to cases of special difficulty. Some very obvious explanations are duly set forward, while in more doubtful cases help is often not forthcoming.

In the volume of Plant-Names which I hope to prepare for the Early English Text Society, I shall try to identify as far as possible all the plant-names, both English and Latin, with their modern scientific equivalents. This will be a tedious work, and one in which mistakes are certain to occur; but a foundation will then have been laid for the future production of a comprehensive work on English plant-names which shall take in all, from the earliest to the most recent. When such a work comes to be done, the great value of collections like this of Mr. Mowat will become apparent.

JAMES BRITTEN

LETTERS TO THE EDITOR

[*The Editor does not hold himself responsible for opinions expressed by his correspondents. Neither can he undertake to return, or to correspond with the writers of, rejected manuscripts. No notice is taken of anonymous communications.*

[*The Editor urgently requests correspondents to keep their letters as short as possible. The pressure on his space is so great that it is impossible otherwise to ensure the appearance even of communications containing interesting and novel facts.*]

The Analysis of the Tuning Fork

MR. HERMANN SMITH, in a letter in NATURE last week, commenting upon my paper read before the Physical Society on June 10, of which you gave a short report, offers some very cogent experiments in support of the evidence I have endeavoured to give, that the tuning-fork does not communicate its sonorous vibrations to a sounding-board through a *ventroid*, as we find generally accepted upon the theory of Chladni. In remarks upon my paper at the Physical Society, Lord Rayleigh suggested that this matter could be demonstrated by cutting a tuning-fork out in both ends of a long steel bar in the manner I had done, for an experiment, in one end only; we might then observe if sonorous vibrations would be communicated through either of the prongs of the double fork, at the opposite end to that set in vibration. In the following week I constructed such a fork, and I found that either of the non-vibrating prongs, when the opposite ones were set in vibration, would form a perfect stem to the fork, and communicate sonorous vibrations just as well as a single stem. In this case it will be seen that the prongs, which may be considered to form the stem, lead directly to the places on the fork pointed out as its nodes by Chladni. It appears, therefore, evident that a node may communicate sonorous vibration to a sounding-board.

After reading my paper Dr. Stone told me in conversation that he had constructed a tuning-fork with a rod projecting at right angles to the open space between the prongs, and directly from its stem, and that this rod communicated sonorous vibrations from the fork to a sounding-board nearly as perfectly as the direct stem. This modified form of fork I also made by screwing a stem into my experimental fork, which was made in the end of a flat steel bar. I found it to act as Dr. Stone had stated. These experiments appear further to show that sonorous vibrations are communicated through nodes to sounding-boards. If we may apply this principle to stringed instruments, we must look rather to the bridge than the transverse motion of the string, as the communicator of the sonorous vibrations which produces the note. I may say that the discussion of Chladni's theory was not the object of my paper, the purpose of which was to show that the sonorous vibrations forming a note are possibly compounded of vibrations of much smaller amplitude than generally assumed, which was perhaps better demonstrated by other experiments.

W. F. STANLEY

The Mount Pisgah (U.S.) Stone Carvings

THE number of NATURE dated June 15 (p. 160) contains some statements relating to the curious stone carvings discovered by Mr. M. S. Valentine in the neighbourhood of Mount Pisgah, North Carolina, and now exhibited by him in Europe. Before leaving the United States, Mr. Valentine brought his specimens to Washington, in order to have them examined by Prof. Baird, the Director of the United States National Museum, and by myself. I am therefore enabled to express an opinion concerning them. Having been for many years in charge of the largest